Recreational Uses

The Kenai National Wildlife Refuge receives more recreational use than any other refuge in Alaska.

The refuge is used for a variety of recreational purposes. It receives more recreational use than any other refuge in Alaska due to its accessibility and proximity to Anchorage. Some of these recreational uses may pose potential contaminant concerns for the refuge. The topics addressed in this section include hunting, fishing, snowmobile use and boating.

Hunting and Fishing

Residual lead from shot and fishing weights/jigs may pose potential contamination issues. From the 1970s to 1991, the use of nontoxic shot eventually was implemented for waterfowl hunting in the United States, but lead from shot still persists in the environment. Fishing weights and jigs are also potential sources of lead. Intensive fishing occurs in several areas on the refuge, especially the Kenai River. Because anglers are so numerous, the sport is often called "combat fishing."

Currently, the refuge is in the process of implementing several leadfree fishing areas. By 2001, anglers will be unable to use lead sinkers or jigs in fishing areas designated as lead-free. These lead-free areas include the Kenai River, for the first three miles below Skilak Lake, and the Swan Lake and Swanson River Canoe Systems.

The refuge narratives only document one account of lead-related wildlife toxicity, which occurred in 1990 when a bald eagle (Haliaeetus leucocephalus) died of acute lead toxicity. According to Jill Birchell, a USFWS Special Agent, two more bald eagles died of lead poisoning near the refuge in 1997.

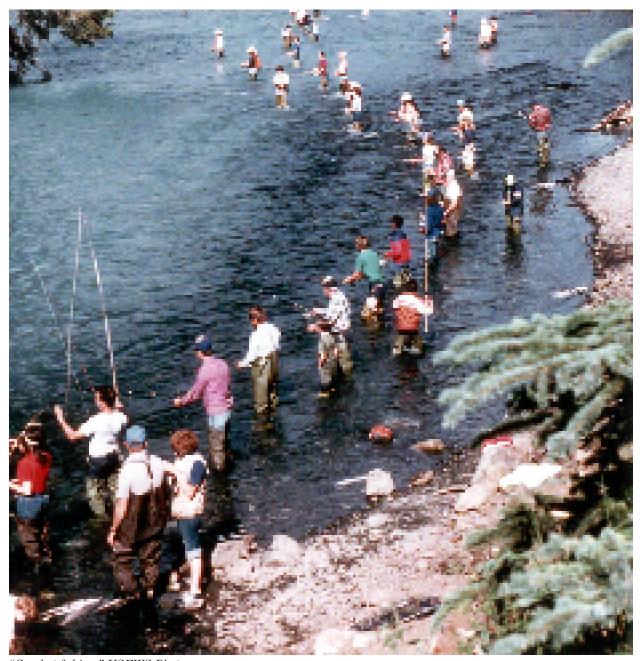
Snowmobile Use

Snowmobile use and recreation have grown increasingly popular on the refuge. During the winter, it is estimated that several hundred snowmobilers utilize the refuge each weekend. One area that receives considerable snowmobile activity is Caribou Hills. This increased snowmobile activity concerns some refuge personnel. Recently, issues have arisen about air pollution and snowmobile emissions in other federally managed areas, such as Yellowstone National Park. In fact, diminished air quality from snowmobiles has prompted the National Park Service (NPS) to ban private snowmobile use in Yellowstone and Grand Teton National Parks by 2003-2004. Although the scale of snowmobile use is much greater in Yellowstone National Park, snowmobile emissions may pose air quality issues for the KNWR.

Snowmobiles have two-stroke engines that emit more hydrocarbons (HC) and particulate matter (PM) than vehicles with four-stroke engines, such as automobiles (NPS, 2000). Snowmobiles also emit other pollutants including VOCs, nitrogen oxides (NOx) and carbon monoxide (CO). According to a study by the NPS (2000), "[w]hen

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National Park Service 2000



 $"Combat fishing." \ USFWS \ Photo.$

compared to various automobile emission estimates, a snowmobile operating for 4 hours, using a conventional 2-stroke engine, can emit between 10 and 70 times more CO and between 45 and 250 times more HC than an automobile driven 100 miles" (page 2).

Boating

Motorized boating also has increased steadily on the refuge. However, in several areas motorized boats are not allowed. Some areas closed to motorized boats are lakes within the Canoe Lakes Unit of the Kenai Wilderness and sections of the Kenai River. In some portions of the refuge where boat use is allowed, there are horsepower and no-wake restrictions. According to refuge personnel,

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the Kenai River receives the most motorized boat traffic on the refuge. The primary concern is two-stroke motors, which emit contaminants to the environment by direct discharge of fuel and incomplete combustion of fuel. A two year water quality study on the Kenai River and its tributaries conducted by Litchfield and Kyle (1992) revealed that gasoline components, BTEX, were elevated in some samples during the peak boating months of June and July, when compared to May and August.

Summary: Recreational Uses

The refuge is utilized for a variety of recreational purposes. It receives more recreational use than any other refuge in Alaska due to its accessibility and proximity to Anchorage. Some recreational uses may pose potential contaminant concerns for the refuge.